

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A recording position correction method for correcting position deviation in a sub-scanning direction crossing a main scanning direction of a recording position on a medium to be recorded, wherein an inkjet type recording apparatus performs recording on said medium to be recorded by ejecting ink from a plurality of nozzles while allowing a recording head, on which nozzle arrays comprising said plurality of nozzles provided substantially in said sub-scanning direction are arranged substantially in said main scanning direction, to perform scanning along at least one of forward and backward paths in said main scanning direction, the method comprising:

an ejection step of ejecting said ink from said plurality of nozzles onto said medium to be recorded;

a measurement step of measuring an amount of position deviation in said sub-scanning direction of an ink dot recorded; and

a correction step of correcting a recording position of an ink dot to be recorded on said ~~material~~ medium for each of said plurality of nozzles based on said measured amount of said position deviation;

wherein said position deviation is measured based on ~~an interval~~ two intervals in said sub-scanning direction between two pairs of loci drawn by at least ~~one nozzle~~ two nozzles of each of

a first nozzle array and a second nozzle array which are not adjacent to each other in said main scanning direction among said plurality of nozzle arrays in said measurement step so as to detect an inclination of said recording head; and

wherein said at least ~~one nozzle~~ two nozzles of said first nozzle array and said at least ~~one nozzle~~ two nozzles of said second nozzle array are located at different positions in said sub-scanning direction in said ejection step.

2. (cancelled).

3. (previously presented): A recording position correction method as claimed in claim 1, wherein said ink is further ejected from a nozzle of a nozzle array among said plurality of nozzle arrays, except said first nozzle array and said second nozzle array, in said ejection step, and

said recording position of said ink dot to be recorded on said material for each of said plurality of nozzles is previously shifted and corrected based on an amount of position deviation of an ink dot ejected and recorded from at least one nozzle of each of said first nozzle array and said second nozzle array and at least one nozzle of said nozzle array except said first nozzle array and said second nozzle array in said correction step.

4. (original): A recording position correction method as claimed in claim 1, wherein said ink is ejected from said plurality of nozzles in order that a color of said ink from each of said nozzle arrays is different from one another in said ejection step, and

said recording position of said ink dot is previously shifted and corrected for each of said colors in said correction step.

5. (original): A recording position correction method as claimed in claim 1, wherein said ink is ejected while said recording head performs scanning along said forward and/or backward path(s) in said main scanning direction in said ejection step, and

said recording position of said ink dot is previously shifted and corrected in said correction step based on an intermediate value between an amount of position deviation of an ink dot ejected and recorded in case said ink is ejected while said recording head performs scanning along said forward path in said main scanning direction and an amount of position deviation of an ink dot ejected and recorded in case said ink is ejected while said recording head performs scanning along said backward path.

6. (original): A recording position correction method as claimed in claim 1, wherein said ink is ejected while said recording head performs scanning along said forward and/or backward path(s) in said main scanning direction in said ejection step, and

correction is performed in said correction step, wherein said recording position of an ink dot to be recorded along said forward path in said main scanning direction is previously shifted based on an amount of position deviation in case said recording head performs scanning along said forward path in said main scanning direction and

said recording position of an ink dot to be recorded along said backward path in said main scanning direction is previously shifted based on an amount of position deviation in case said recording head performs scanning along said backward path in said main scanning direction.

7. (previously presented): A recording position correction method as claimed in claim 1, wherein said first nozzle array and said second nozzle array each eject ink of a different color;

wherein said ink is ejected from at least one nozzle of each of the first nozzle array and the second nozzle array based on a priority given to a color of which density is highest in said ejection step, and

said recording position of said ink dot to be recorded on said material for each of said plurality of nozzles is previously shifted and corrected based on an amount of position deviation of an ink dot ejected and recorded from said nozzle of each of said first nozzle array and said second nozzle array in said correction step.

8. (currently amended): An inkjet type recording apparatus for performing recording on said medium to be recorded by ejecting ink from a plurality of nozzles, to perform scanning along at least one of forward and backward paths in said main scanning direction, the apparatus comprising

a recording head on which nozzle arrays comprising the plurality of nozzles provided substantially in a sub-scanning direction are arranged substantially in a main scanning direction, wherein the ink is ejected from at least one nozzle of each of a first nozzle array and a second

nozzle array which are not adjacent to each other in the main scanning direction among the plurality of nozzle arrays;

a correcting unit for correcting a recording position of an ink dot to be recorded on said material for each of said plurality of nozzles based on ~~an interval~~two intervals in a sub-scanning direction, caused by a tilt of the recording head, between two pairs of loci drawn by at least ~~one nozzle~~two nozzles of each of the first nozzle array and the second nozzle array which are not adjacent to each other in the main scanning direction;

wherein said at least ~~one nozzle~~two nozzles of said first nozzle array and said at least ~~one nozzle~~two nozzles of said second nozzle array are located at different positions in said sub-scanning direction.

9. (cancelled).

10. (cancelled).

11. (previously presented): A recording position correction method as claimed in claim 1, wherein:

said correction step corrects recording timings of each of the nozzles based on the position deviation, said recording timing defining a timing at which the nozzle ejects the ink.

12. (previously presented): A recording position correction method as claimed in claim 1, wherein said first nozzle array and said second nozzle array are most distanced from each other in said main scanning direction among said plurality nozzle arrays.

13. (new): The recording position correction method as claimed in claim 1, wherein:
a first interval of said at least two intervals is determined between loci drawn by a first nozzle of the first nozzle array and a first nozzle of the second nozzle array;
a second interval of said at least two intervals is determined between loci drawn by a second nozzle of the first nozzle array and a second nozzle of the second nozzle array; and
a spacing between the first and second nozzles of the first nozzle array and a spacing between the first and second nozzles of the second nozzle array are both symmetric with respect to a line perpendicular to the first nozzle array and the second nozzle array.

14. (new): The inkjet type recording apparatus according to claim 8, wherein:
a first interval of said at least two intervals is determined between loci drawn by a first nozzle of the first nozzle array and a first nozzle of the second nozzle array;
a second interval of said at least two intervals is determined between loci drawn by a second nozzle of the first nozzle array and a second nozzle of the second nozzle array; and
a spacing between the first and second nozzles of the first nozzle array and a spacing between the first and second nozzles of the second nozzle array are both symmetric with respect to a line perpendicular to the first nozzle array and the second nozzle array.

15. (new): A computer readable medium which stores a program to correct position deviation in a sub-scanning direction crossing a main scanning direction of a recording position on a medium to be recorded, wherein an inkjet type recording apparatus performs recording on said medium to be recorded by ejecting ink from a plurality of nozzles while allowing a recording head, on which nozzle arrays comprising said plurality of nozzles provided substantially in said sub-scanning direction are arranged substantially in said main scanning direction, to perform scanning along at least one of forward and backward paths in said main scanning direction, the program enabling the inkjet type recording apparatus to perform:

an ejection step of ejecting said ink from said plurality of nozzles onto said medium to be recorded;

a measurement step of measuring an amount of position deviation in said sub-scanning direction of an ink dot recorded and detecting an inclination of said recording head with respect to said main scanning direction; and

a correction step of correcting a recording position of an ink dot to be recoded on said medium for each of said plurality of nozzles based on said measured amount of said position deviation;

wherein said deviation and said inclination are measured and detected based on two intervals in said sub-scanning direction between two pairs of loci drawn by at least two nozzles of each of a first nozzle array and a second nozzle array which are not adjacent to each other in said main scanning direction among said plurality of nozzle arrays in said measurement step; and said two nozzles of said first nozzle array and said two nozzles of said second nozzle array are located at different positions in said sub-scanning direction in said ejection step; and

wherein

a first interval of said at least two intervals is determined between loci drawn by the first nozzle of the first nozzle array and the first nozzle of the second nozzle array;

a second interval of said at least two intervals is determined between loci drawn by the second nozzle of the first nozzle array and the second nozzle of the second nozzle array; and

a spacing between the first and second nozzles of the first nozzle array and a spacing between the first and second nozzles of the second nozzle array are both symmetric with respect to a line perpendicular to the first nozzle array and the second nozzle array.